

What is claimed is:

1. A sensing pixel of a thin film transistor-based resistive-type fingerprinting touch screen panel, the sensing pixel comprising:
 - a thin film transistor having a poly-Si film layer forming a channel region and at least one drain electrode connecting the poly-Si film layer to a contact metal pad;
 - a sensing electrode connected to the contact metal pad through a via, wherein at least a portion of the via overlaps the poly-Si film layer when viewed through the sensing electrode.
2. The sensing pixel of claim 1, wherein a substantial portion of the via overlaps the poly-Si film layer when viewed through the sensing electrode.
3. The sensing pixel of claim 1, wherein the sensing electrode comprises indium tin oxide or indium zinc oxide.
4. The sensing pixel of claim 1, wherein the sensing pixel having an aperture ratio of greater than about 80%.
5. A thin film transistor-based resistive-type fingerprinting touch screen panel comprising:
 - an upper substrate;
 - a lower substrate beneath the upper substrate , wherein the lower substrate comprises an array of thin film transistor-based sensing pixels, each of the sensing pixels comprising:
 - a thin film transistor having a poly-Si film layer forming a channel region and at least one drain electrode connecting the poly-Si film layer to a contact metal pad;
 - a sensing electrode connected to the contact metal pad through a via, wherein at least a portion of the via overlaps the poly-Si film layer when viewed through the sensing electrode.

6. The touch screen panel of claim 5, wherein a substantial portion of the via overlaps the poly-Si film layer.
7. The touch screen panel of claim 5, wherein the sensing electrode comprises indium tin oxide or indium zinc oxide.
8. The touch screen panel of claim 5, wherein the sensing pixel having an aperture ratio of greater than about 80%.
9. A display system having a fingerprinting feature comprising:
 - a LCD panel;
 - a backlight for the LCD panel;
 - a thin film transistor-based resistive-type fingerprinting touch screen panel over the LCD panel, wherein the thin film transistor-based resistive-type fingerprinting touch screen panel comprises:
 - an upper substrate;
 - a lower substrate beneath the upper substrate, wherein the lower substrate comprises an array of thin film transistor-based sensing pixels, each of the sensing pixels comprising:
 - a thin film transistor having a poly-Si film layer forming a channel region and at least one drain electrode connecting the poly-Si film layer to a contact metal pad;
 - a sensing electrode connected to the contact metal pad through a via, wherein at least a portion of the via overlaps the poly-Si film layer when viewed through the sensing electrode.
10. The touch screen panel of claim 9, wherein a substantial portion of the via overlaps the poly-Si film layer.
11. The touch screen panel of claim 9, wherein the sensing electrode comprises indium tin oxide or indium zinc oxide.

12. The touch screen panel of claim 9, wherein the sensing pixel having an aperture ratio of greater than 80%.
13. The sensing pixel of claim 1, wherein the sensing electrode is transparent.
14. The touch screen panel of claim 5, wherein the sensing electrode is transparent.
15. The touch screen panel of claim 9, wherein the sensing electrode is transparent.
16. The touch screen panel of claim 5, wherein the upper substrate is made of PET.
17. The touch screen panel of claim 9, wherein the upper substrate is made of PET.